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Pooled Efficacy Analysis of IncobotulinumtoxinA in the Multipattern Treatment of Upper- and Lower-Limb Spasticity in Children and Adolescents With Cerebral Palsy

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identifiable from clinical history and presentation. These factors could be useful in clinical practice as we consider genetic testing more widely in children.

Poster 099

Pooled efficacy analysis of Incobotulinumtoxina in the multipattern treatment of upper- and lower-limb spasticity in children and adolescents with cerebral palsy

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Introduction: This pooled analysis assessed the efficacy of incobotulinumtoxinA for lower-limb (LL) and upper-limb (UL) spasticity in children and adolescents with cerebral palsy (CP) using data from the first controlled injection cycle of 2 large Phase 3 studies, TIM (NCT01893411) and XARA (NCT02002884).
Methods: Ambulant and non-ambulant pediatric patients with spasticity due to CP (2–17 years of age; uni- or bilateral CP; Ashworth Scale [AS] score ≥2 in clinical patterns for treatment) were enrolled. Patients were randomized (2:1:1) to 3 incobotulinumtoxinA dose groups: 8, 6, 2 U/kg body weight (BW), maximum 200, 150, 50 U per LL clinical pattern in TIM and per UL in XARA. Additional multipattern treatment was allowed in both studies with total body doses up to 16–20 U/kg BW (≤400–500 U) depending on study and Gross Motor Function Classification System (GMFCS) levels I-V. Changes from baseline in AS score and Global Impression of Change Scale (GICS) scores at Week 4 were assessed in patients with LL treatment (TIM and XARA) and in those with UL treatment (XARA).
Results: In total, 603 patients with LL treatment from both studies (58.9% male, mean [SD] age 6.8 [4.2] years, BW 23.6 [13.5] kg, 27.2% GMFCS IV-V) and 350 patients with UL treatment from XARA (62.9% male, mean [SD] age 7.3 [4.4] years, BW 25.0 [15.0] kg, 30.9% GMFCS IV-V) were included in this analysis. Improvements in AS score for the main LL and UL clinical patterns were seen with all incobotulinumtoxinA doses at Week 4 (all $P<0.0001$ vs baseline except adducted thigh at 8 U/kg). Significantly greater improvement in AS score for the main UL clinical pattern was noted in the 8 U/kg versus the 2 U/kg dose group ($P=0.004$). Investigator's, child/adolescent's and parent/caregiver's GICS scores confirmed improvement in LL and UL spasticity at Week 4.
Conclusions: IncobotulinumtoxinA provides effective multipattern treatment of LL and UL spasticity in pediatric patients with CP (GMFCS I-V).

Poster 100

Dystonia in children with acquired brain injury

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Objectives: (1) To estimate the incidence/frequency of dystonia and/or status dystonicus after acquired brain injury (ABI) admitted to paediatric intensive care unit. (2) To analyse the trajectory of dystonia over a 6-month period.
Methods: The Children's Health Ireland at Temple Street PICU electronic database was searched for key terms related to ABI from January 2016 - March 2021. Individuals meeting inclusion criteria were further analysed and clinical data pertinent to dystonia, treatment and outcomes was recorded for analysis.
Results: Six-hundred and forty three PICU episodes (580 patients) met search criteria of key terms. Traumatic brain injury (TBI) was the most frequent ABI 109/580 (18.7%), followed by CNS infection 96/580 (16.6%). Twelve patients developed dystonia following ABI with an incidence of 2.1% overall and 6.4% in our TBI group. 3/12 (25%) developed status dystonicus. All patients developed dystonia within the first month following ABI (100%). All had evidence of severe injury (GCS 8 or less) at time of PICU admission and 3/12 (25%) required emergency neurosurgical intervention. Most commonly used medical therapy included clonidine (n=10), baclofen (n=10), gabapentin (n=5) and trihexyphenidyl (n=2). Often, requiring a combination of medications. Outcomes at follow up were variable. One patient died prior to 6-month follow up. Some patients displayed good functional improvements with rehabilitation, but most patients (8/11, 72.7%) continued to require medication for their dystonia 6 months after their injury.
Conclusions: The incidence of dystonia following ABI is 2.1% and 6.4 % in the TBI group. Dystonia typically emerges within a month of ABI and was persistent in the majority. Our patient cohort displayed variable outcomes, although sample size is small. We hypothesize that dystonia was under-recognised, and that the true number of patients who developed dystonia following ABI is greater than recorded.

Poster 101

Can we predict which children and young people with cerebral palsy and significant scoliosis will need operative vs non operative treatment?

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Can we answer the question: "Will my teenager with severe cerebral palsy need spinal surgery?" Paediatric disability literature describes the presence of scoliosis but rarely discusses its magnitude or whether surgical or non-surgical routes are offered. Orthopaedic papers tend group all causes of disability, mixing syndromic and cerebral palsy, despite their different natural histories. The decision to undergo surgery in this cohort, is often made remote from the paediatric teams known to the child in